

AMENDMENTS TO THE SPECIFICATION

In the Specification

Please delete the paragraph numbered [0008] beginning on page 3, and insert the following in place thereof:

A1 [0008] A technique known as bump mapping is sometimes used to create the appearance of a natural surface or geometric details on a planar area of a polygon. Bump mapping is based on approximating illumination from the surface by perturbing interpolated normals over the polygonal surfaces using stored bump maps. However, no real displacement of pixels is achieved, and bump mapping techniques are not effective for ~~silhouettes~~ silhouettes and other surfaces that do not directly face the virtual camera. Among other problems with bump mapping, the bump maps require additional storage and self occlusion does not happen correctly.

Please delete the paragraph beginning on page 5, line 2, and insert the following in place thereof:

A2 [0010] The novel features believed characteristic of the invention are set forth in the appended claims. The present invention is illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings and in which like reference numerals refer to similar elements. The invention itself, however, as well as a preferred mode of use, will best be understood by reference to the following detailed description of an illustrative embodiment when read in conjunction with the accompanying drawings:

Please delete the paragraph numbered [0041] beginning on page 12, and insert the following in place thereof:

A3 [0041] Accordingly, as shown, the spatial patch 440 may be used to represent a surface portion 420 of an object 410. Typically, the spatial patch has both appearance data and displacement data for the same nodes, which offers advantages over texture triangle mesh-texture mapping approaches in which the texture and geometry data is separated ~~sepatated~~.

Advantageously, since the spatial patch may store displacement data separately for each of the nodes, the position and appearances of the nodes can be used to create a representation that more closely approximates the smooth curvature of the spherical object 410. This may greatly improve the representation of three-dimensional objects, particularly three-dimensional objects that have complicated geometries and smooth surfaces that are poorly represented by triangle meshes. Thus, spatial patches may have uses and advantages in any of the graphical and media arts, such as, but not limited to, video games, virtual reality, television (e.g., three-dimensional television), Virtual Reality Modeling Language (VRML), 3D chat, films (e.g., computer generated images/animation and special effects), CAD, presenting graphics over the Internet, and in other environments.
